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Factors influencing the variation in costs in the delivery of STD services in Florida

Florida Public Health Practice Based Research Network

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Background

Sexually transmitted diseases (STD) continue to be a major health problem in the U.S.; however, funding for these services has been decreasing during the last five years. County Health Department (CHD) revenue sources for STD prevention/control vary extensively not only with county population and infection rates but with the specific sources of revenue including county, state and federal support which can influence how health departments respond to controlling these diseases.

Methods

This study is a retrospective analysis using secondary data (2012) for all Florida counties to examine factors influencing STD services expenditures. Data included both CHD revenues and expenditures for STD services; Gonorrhea, Chlamydia, and Syphilis counts and rates by county; and U.S. Census data for demographic and income data by county.

Models examined the effect of county level factors such as total population, STD rate/100,000 population, population density/square mile, population with income below 200% FPL, total CHD revenue per capita, CHD county tax revenue per capita, percent of population 24 years old and under, and percent black/other population on CHD STD expenditure per case.

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Results

General linear regression models were performed using the best subset selection method based on the R-square statistic to assess the best predictive model. The regression analysis showed that two variables in the model were found to be marginally significant with the outcome measure – cost per case: county STD rate ($\beta=-0.21$, $p=0.063$) and CHD count tax revenue per capita ($\beta=13.20$, $p=0.055$).

Figure 1. Top 12 Florida county STD rates, population density and cost per case

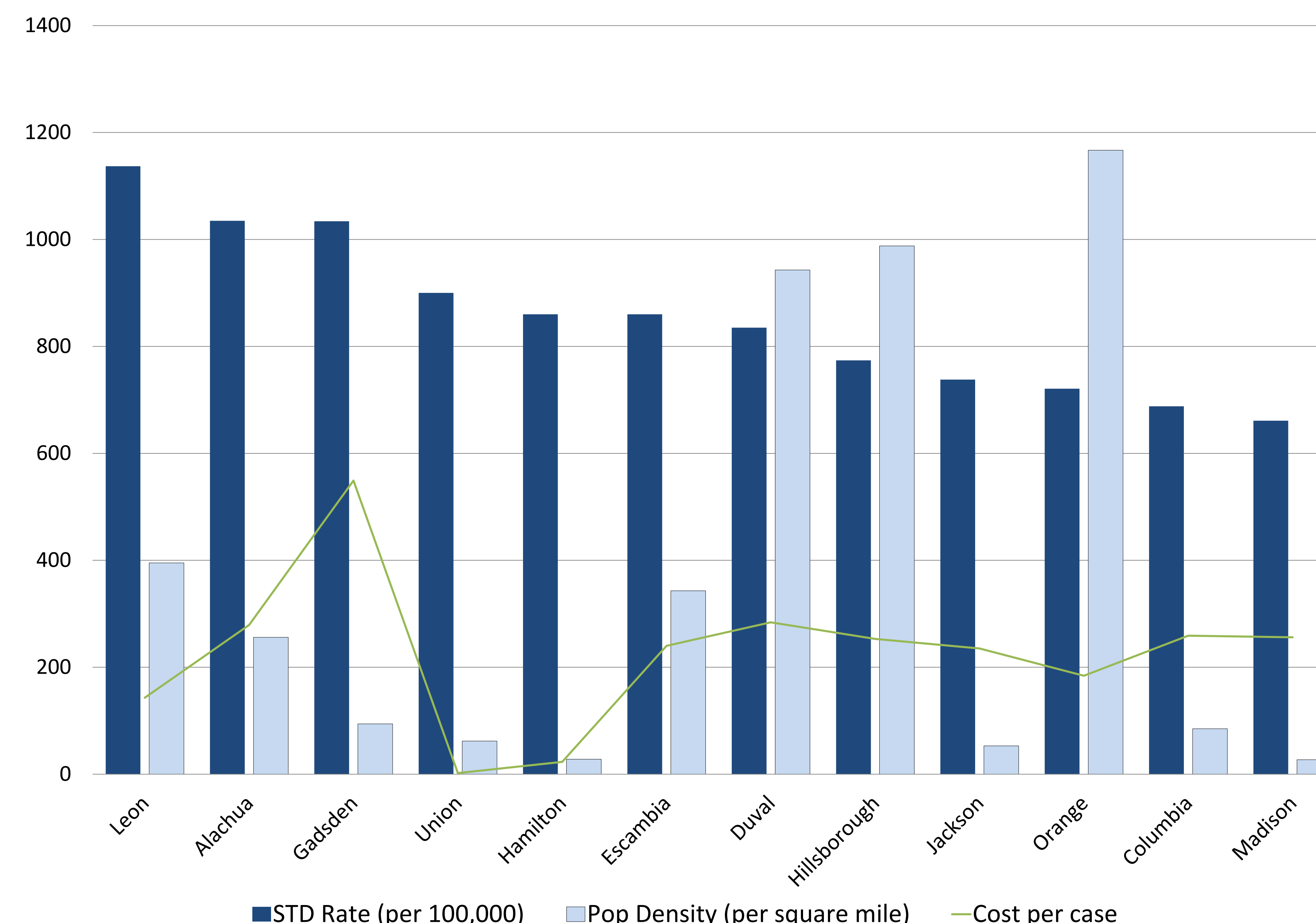
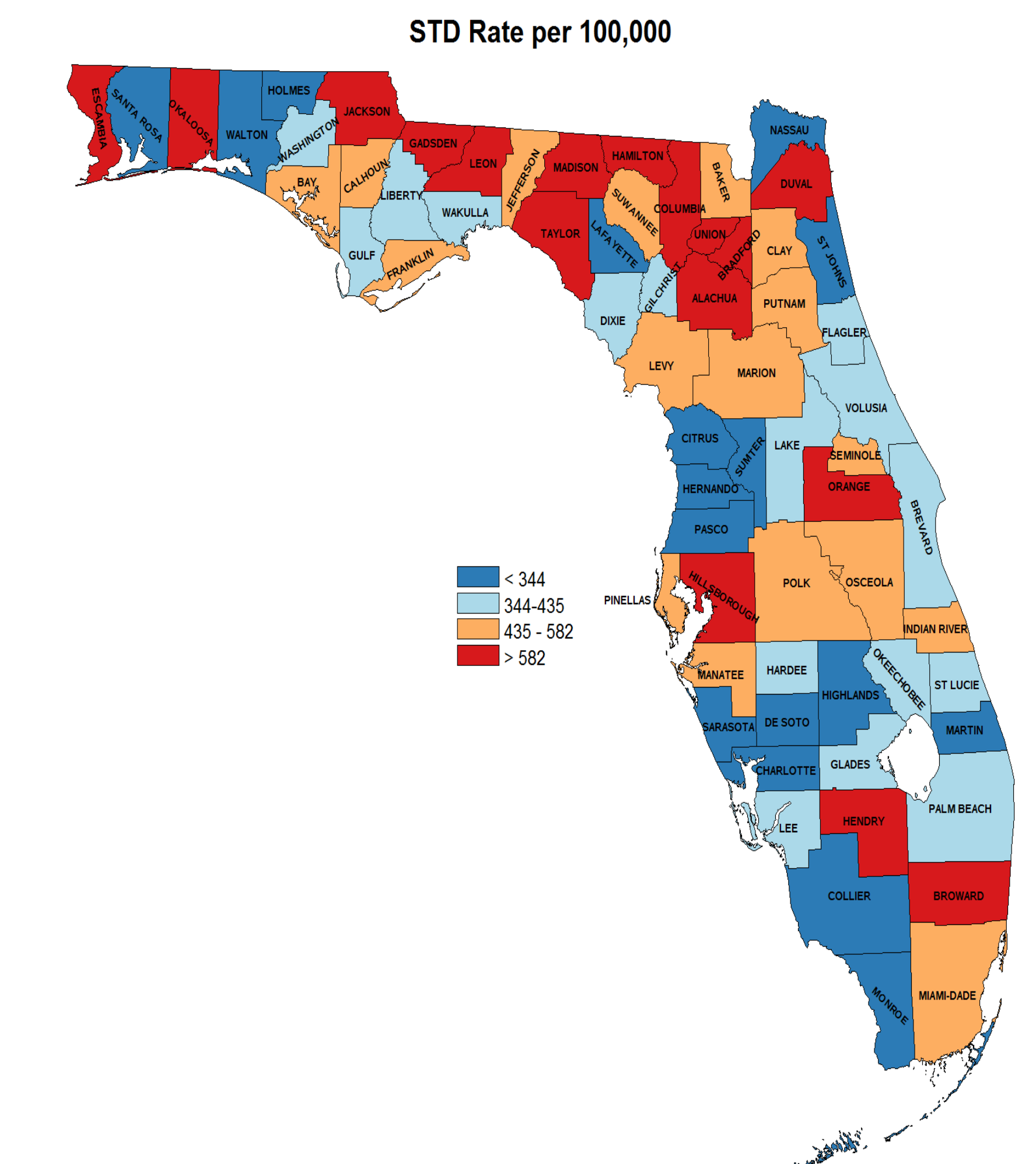


Figure 2. Florida STD rates by county



Conclusions

We found a wide variability in STD rates and costs for STD services across the state with some of the more rural counties having the highest STD rates. The counties also varied significantly in the different sources of funding with several counties having no local tax support for CHD STD services. We found the availability of local tax funding for CHDs is statistically linked to higher CHD STD expenditure per case. There is an inverse relationship between STD rates and unit costs - as the STD rate increases, the cost per STD case decreases implying some economies of scale.

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